

Listing of the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

1. (Previously Presented) A computer program product, tangibly stored on a machine-readable medium, comprising a first application's instructions to perform operations on a client comprising:

generating a first container object, the first container object having a recognizable container type that is associated with the first application, the first container object containing a sender's certificate or a request for a recipient's certificate, and where generating the first container object includes putting the certificate or request in the container object;

using a second application on the client distinct from the first application to transmit the first container object to a recipient's address, wherein the second application is an e-mail client application or a Web browser application;

automatically obtaining a second container object from the second application, the second container object having been received by the second application and the second container object having the same recognizable container type as the first container object; and

automatically identifying and extracting one or more certificates from within the second container object.

2. (Previously Presented) The computer program product of claim 1, further comprising the first application's instructions to perform operations comprising:

prior to generating a first container object, receiving input from a sender specifying the recipient's address and specifying one or more of a certificate of the sender and a request for the recipient's certificate to include in the first container object.

3. (Original) The computer program product of claim 1, wherein transmitting the first container object includes transmitting the first container object by one of electronic mail and Hypertext Transfer Protocol.

4. (Original) The computer program product of claim 1, wherein the first container object is generated by a server.

5. (Previously Presented) The computer program product of claim 1, further comprising the first application's instructions to perform operations comprising:

- determining whether the sender has multiple certificates;
- if the sender has multiple certificates, receiving input from the sender selecting one or more of the sender's multiple certificates;
- retrieving the sender's selected certificates from a certificate database; and
- including the sender's selected certificates in the first container object.

6. (Previously Presented) The computer program product of claim 1, wherein the first container object includes a request for a recipient's certificate, further comprising the first application's instructions to perform operations comprising:

- receiving input from a sender specifying a return address for receiving the recipient's certificate and instructions for returning the recipient's certificate; and
- including in the first container object the return address and instructions for returning the recipient's certificate.

7. (Previously Presented) The computer program product of claim 1, wherein the first container object includes a sender's certificate, and further comprising the first application's instructions to perform operations comprising:

- including in the first container object validation information to be used to validate the sender's certificate.

8. (Original) The computer program product of claim 1, wherein the container type is Forms Data Format.

9. (Previously Presented) A computer program product, tangibly stored on a machine-readable medium, for a client machine which associates a first application with a MIME container type, so that subsequent to a second application on the client distinct from the first application receiving a container object having the MIME container type, it is recognized that the container type is associated with the first application, comprising the first application's instructions to perform operations on the client comprising:

automatically obtaining the container object from the second application, wherein the second application is an e-mail client application or a Web browser application;

recognizing that the container object may include a certificate of a sender of the container object; and

automatically determining if the container object contains a certificate of the sender.

10. (Cancelled)

11. (Previously Presented) The computer program product of claim 9, wherein the MIME container type is Forms Data Format.

12. (Previously Presented) The computer program product of claim 9, wherein the container object includes a certificate and validation information, and further comprising the first application's instructions to perform operations comprising:

accepting or rejecting the certificate using the validation information; and

if the certificate is accepted, extracting the certificate and storing the certificate.

13. (Previously Presented) A computer program product, tangibly stored on a machine-readable medium, for a machine which associates a first application with a MIME container type, so that subsequent to a second application distinct from the first application receiving a container object having the MIME container type, it is recognized that the MIME container type is associated with the first application, wherein the second application is an e-mail client application or a Web browser application, the computer program product comprising the first application's instructions to perform operations comprising:

- automatically obtaining a first container object from the second application;
- recognizing that the first container object may include a request for a certificate of a recipient of the container object;
- automatically determining if the first container object includes a request for a certificate of the recipient; and
- if a request is included in the first container object, then responding to the request.

14. (Previously Presented) The computer program product of claim 13, further comprising the first application's instructions to perform operations comprising:

- generating a second container object of the same MIME container type including a certificate of the recipient;
- extracting a return address from the first container object; and
- using the second application to transmit the second container object to the return address.

15. (Cancelled)

16. (Previously Presented) The computer program product of claim 14, wherein the certificate of the recipient is stored in a certificate database, and further comprising the first application's instructions to perform operations comprising:

- determining whether the recipient has multiple certificates;
- if the recipient has multiple certificates, receiving input from the recipient selecting one or more of the recipient's multiple certificates;
- retrieving the selected certificates from the certificate database; and
- including the selected certificates in the second container object.

17. (Previously Presented) The computer program product of claim 14, further comprising the first application's instructions to perform operations comprising:

including in the second container object validation information to be used to validate the certificate of the recipient.

18. (Original) The computer program product of claim 14, wherein the first container object and the second container object are a Forms Data Format container type.

19. (Previously Presented) The computer program product of claim 13, wherein the first container object is received from a networked server and further comprising the first application's instructions to perform operations comprising:

transmitting the recipient's certificate back to the networked server by Hypertext Transfer Protocol.

20. (Original) The computer program product of claim 13, wherein the container type is Forms Data Format container type.

21-22. (Canceled)

23. (Previously Presented) The computer program product of claim 1, wherein the first container object contains both a sender's certificate and a request for a recipient's certificate.

24. (Previously Presented) The computer program product of claim 23, further comprising the first application's instructions to perform operations comprising:

prior to generating a first container object, receiving input from a sender specifying the recipient's address and specifying one or more of a certificate of the sender and a request for the recipient's certificate to include in the first container object.

25. (Cancelled)

26. (Previously Presented) The computer program product of claim 23, further comprising the first application's instructions to perform operations comprising:

determining whether the sender has multiple certificates;

if the sender has multiple certificates, receiving input from the sender selecting one or more of the sender's multiple certificates;

including instructions for retrieving the sender's selected certificates in the first container object.

27. (Previously Presented) The computer program product of claim 23, wherein the first container object includes instructions requesting a recipient's certificate, further comprising the first application's instructions to perform operations comprising:

receiving input from a sender specifying a return address for receiving the recipient's certificate and instructions for returning the recipient's certificate; and

including in the first container object the return address and instructions for returning the recipient's certificate.

28. (Previously Presented) The computer program product of claim 23, wherein the first container object includes a sender's certificate, further comprising the first application's instructions to perform operations comprising:

including in the first container object instructions for validating the sender's certificate.

29. (Original) The computer program product of claim 23, wherein the container type is Forms Data Format.

30. (Previously Presented) A computer-implemented method, comprising:

generating, using a first application on a client, a first container object, wherein the first container object has a recognizable container type that is associated with the first application, the first container object containing a sender's certificate or a request for a recipient's certificate, and where generating the first container object includes putting the certificate or request in the container object;

transmitting, using a second application on the client which is distinct from the first application, the first container object to a recipient's address, wherein the second application is an e-mail client application or a Web browser application;

receiving, using the second application, a second container object, wherein the second container object has the same recognizable container type;

automatically recognizing, using the second application, that the container type is associated with the first application; and

invoking the first application, the first application automatically identifying and extracting one or more certificates from within the second container object.

31. (Previously Presented) The method of claim 30, further comprising:

prior to generating a first container object, receiving input, using the first application, from a sender specifying the recipient's address and specifying one or more of a certificate of the sender and a request for the recipient's certificate to include in the first container object.

32. (Cancelled)

33. (Original) The method of claim 30, wherein the first container object is generated by a server.

34. (Previously Presented) The method of claim 30, further comprising,
determining, using the first application, whether the sender has multiple certificates;
if the sender has multiple certificates, then receiving input, using the first application,
from the sender selecting one or more of the sender's multiple certificates;
retrieving, using the first application, the sender's selected certificates from a certificate
database; and
including, using the first application, the sender's selected certificates in the first
container object.
35. (Previously Presented) The method of claim 30, wherein the first container object includes a
request for a recipient's certificate, the method further comprising:
receiving input, at the first application, from a sender specifying a return address for
receiving the recipient's certificate and instructions for returning the recipient's certificate; and
including in the first container object the return address and instructions for returning the
recipient's certificate.
36. (Previously Presented) The method of claim 30, wherein the first container object includes a
sender's certificate, the method further comprising:
including, using the first application, in the first container object validation information to
be used to validate the sender's certificate.
37. (Original) The method of claim 30, wherein the container type is Forms Data Format.

38. (Previously Presented) A computer-implemented method for receiving a certificate, the method comprising:

receiving, using a second application on a client, a container object, the container object having a recognizable container type that is associated with a first application on the client which is distinct from the second application, wherein the second application is an e-mail client application or a Web browser application;

automatically recognizing, using the second application, that the container type is associated with the first application;

recognizing, using the first application, that the container object may include a certificate of a sender of the container object; and

automatically determining, using the first application, if the container object contains a certificate of the sender.

39. (Previously Presented) The method of claim 38, wherein receiving a container object comprises receiving a message including the container object by at least one of the following: electronic mail or Hypertext Transfer Protocol.

40. (Original) The method of claim 38, wherein the container type is Forms Data Format.

41. (Previously Presented) The method of claim 38, wherein the container object includes a certificate and validation information, the method further comprising:

accepting or rejecting, using the first application, the certificate using the validation information; and

if accepting the certificate, then extracting, using the first application, the certificate and storing the certificate.

42. (Previously Presented) A computer-implemented method for receiving a request for a certificate, the method comprising:

- receiving, using a second application, a first container object, the first container object having a recognizable container type that is associated with a first application which is distinct from the second application, wherein the second application is an e-mail client application or a Web browser application;

- automatically recognizing, using the second application, the container type as associated with the first application

- recognizing, using the first application, that the first container object may include a request for a certificate of a recipient of the container object;

- automatically determining, using the first application, if the first container object includes a request for a certificate of the recipient; and

- if a request is included in the first container object, then responding, using the first application, to the request.

43. (Previously Presented) The method of claim 42, wherein responding to the request further comprises:

- generating, using the first application, a second container object including a certificate of the recipient;

- extracting, using the first application, a return address from the first container object; and

- transmitting, using the second application, the second container object to the return address.

44. (Original) The method of claim 43, wherein transmitting the second container object includes transmitting by one of electronic mail and Hypertext Transfer Protocol.

45. (Previously Presented) The method of claim 43, wherein the certificate of the recipient is stored in a certificate database, the method further comprising,

determining, using the first application, whether the recipient has multiple certificates;
if the recipient has multiple certificates, then receiving input, using the first application, from the recipient selecting one or more of the recipient's multiple certificates;

retrieving, using the first application, the selected certificates from the certificate database; and

including, using the first application, the selected certificates in the second container object.

46. (Previously Presented) The method of claim 43, further comprising:

including, using the first application, in the second container object validation information to be used to validate the certificate of the recipient.

47. (Original) The method of claim 43, wherein the first container object and the second container object are a Forms Data Format container type.

48. (Previously Presented) The method of claim 42, wherein the first container object is received from a networked server and wherein responding to the request further comprises:

transmitting, using the second application, the recipient's certificate back to the networked server by Hypertext Transfer Protocol.

49. (Original) The method of claim 42, wherein the container type is Forms Data Format container type.

50. (Previously Presented) A system, comprising:

- a first instance of a first application operable to generate a first container object, the first container object having a recognizable container type that is associated with the first application, the first container object containing a sender's certificate or a request for a recipient's certificate, and where generating the first container object includes putting the certificate or request in the container object;

- a first instance of a second application operable to transmit the first container object to a recipient's address, the second application being distinct from the first application, wherein the second application is an e-mail client application or a Web browser application;

- a second instance of the second application operable to receive the first container object and to automatically recognize the container type as associated with the first application; and

- a second instance of the first application operable to:

- automatically recognize that the first container object may include a request for a certificate of a recipient of the container object;

- automatically determine if the first container object includes the certificate of the sender, and if so, then automatically identify and extract one or more certificates from within the first container object; and

- automatically determine if the first container object includes the request for the certificate of the recipient, and if so, then respond to the request, generating a second container object of the same recognizable container type including the certificate of the recipient, and using the second instance of the second application to transmit the second container object to an address of the sender.

51. (Previously Presented) The system of claim 50, wherein:

the container type is Forms Data Format;

the first application is operable to generate Forms Data Format containers and the second application is an e-mail client application;

the system includes a first computer and a second computer operating in communication with the first computer over the Internet;

the first instance of the first application is installed on the first computer;

the first instance of the e-mail client application is installed on the first computer;

the second instance of the first application is installed on the second computer; and

the second instance of the e-mail client application is installed on the second computer.